

**Applicant:** Steven Jeffrey Goldberg  
**Application No.:** 10/656,495

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (currently amended): A wireless communication system for transmitting and receiving wireless communications using at least one beam comprising:

a plurality of wireless transmit/receive units (WTRUs);

at least one base station having at least one beam forming antenna wherein at least one beam emanating from the beam forming antenna may be dynamically adjusted in at least a vertical dimension; and

a radio network controller (RNC) configured to generate tilt information for dynamically tilting for controlling the dynamic adjustment of the at least one beam considering an affect that tilting a beam may have on other base stations to optimize transmission between the base station antenna and at least one WTRU.

2. (previously presented): The wireless communication system of claim 1 wherein the beam is further dynamically adjusted in a horizontal dimension.

3. (currently amended): The wireless communication system of claim 1 wherein ~~a Node B is provided for generating the base station generates~~ control signals for dynamically adjusting the beam in accordance with the tilt information provided by the ~~RNC radio network controller~~.

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4. (currently amended): The wireless communication system of claim 1 wherein ~~tilt information is sent from the RNC radio network controller to the antenna wherein generates~~ control signals are generated for dynamically adjusting the beam ~~in accordance with based on the~~ tilt information ~~provided by the radio network controller.~~

5. (currently amended): The wireless communication system of claim 1 wherein the beam is tilted downward to reduce interference to and from another base station antenna.

6. (previously presented): The wireless communication system of claim 1 wherein the beam is dynamically adjusted to account for variations in elevation between the WTRUs.

7. (previously presented): The wireless communication system of claim 1 wherein the beam is dynamically adjusted to break up null areas wherein transmission signals are not decodable.

8. (original): The wireless communication system of claim 7 wherein the beam is adjusted by dithering the beam in at least a vertical dimension.

9. (original): The wireless communication system of claim 7 wherein the beam is adjusted by dithering the beam in a vertical and horizontal dimension.

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10. (original): The wireless communication system of claim 1 wherein the beam is adjusted to provide multiple signals along multiple paths to increase the data rate at which a receiving WTRU may receive data contained within the signals.

11. (currently amended): A method for dynamically adjusting beams to optimize transmissions within a wireless communication system, the method comprising:

a radio network controller (RNC) computing tilt information in real-time based on actual conditions in a wireless communication system considering an affect that tilting a beam may have on other base stations under the control of the RNC; and

a base station adjusting at least one beam in at least a vertical dimension based on the ~~computed~~ tilt information.

12. (currently amended): The method of claim 11 wherein further comprising the step of computing the tilt information is computed to adjust the beam to minimize interference to and from another antenna.

13. (currently amended): The method of claim 11 wherein further comprising the step of computing the tilt information is computed to adjust the beam to account for variations in elevation of between WTRUs.

14. (currently amended): The method of claim 11 wherein further comprising the step of computing the tilt information is computed to dither the

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~~beam so that the beam is dithered to break up null areas wherein transmission signals are not decodable.~~

15. (currently amended): A wireless communication system for transmitting and receiving wireless communications using at least one beam comprising:

a plurality of wireless transmit/receive units (WTRUs);

a radio network controller (RNC);

at least one base station having at least one beam forming antenna wherein a beam emanating from the beam forming antenna may be dynamically adjusted in at least a vertical dimension based on tilt information which is generated by considering an affect that tilting a beam may have on other base stations; and

~~a Node B for controlling the dynamic adjustment of the beam to optimize transmission between the base station antenna and at least one WTRU.~~

16. (currently amended): The wireless communication system of claim 15 wherein information from the radio network controller and the plurality of WTRUs is used to compute the tilt information for dynamically adjusting the beam.